



Partial English Translation of Japanese Unexamined Patent
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(0012) The data transmission adapter 22 of the present invention has a flat body case 30 with a rectangular shape in plan view, as shown in Fig. 2, which has a first connector 34 at its one side 32 and a second connector 38 at the other side 36. The adapter 22 has a control circuit 40 in the inside thereof, as shown in Fig. 3.

(0013) The first connector 34, is formed under the RS-232 standard, usually called "25 pin D-SUB connectors" which are frequently used for serial data transmission, such as in the personal computer 26 and various data processing apparatuses, has male type pins 42 and is fixed to the side 32. The first connector 34 can be directly and releasably engaged with the connector 46 having female type pins 44 of the data processing apparatus 10 without using a cable. Also, mounting screws 48 are provided on the outer side of the first connector 34 for engagement with fixing screws 50 of the data processing apparatus 10 to fix the first connector 34 in position in the engaging state.

(0014) The second connector 38 is of a type called a "modular type connector" frequently used for telephones, and has two jacks 52 arranged side by side on the side 36 of the body case 30. The jack 52 has six electrodes 54 which are connected in parallel in the body case 30.

(0015) The control circuit 40 is constituted by a one-chip microcomputer of program control type, and comprises a CPU 56 executing the control of the entire circuit, a ROM 58 for fixedly storing the program for control or necessary data, a RAM 60 for temporarily storing various data, and first and second serial data interfaces 62 and 64

(hereinafter, abbreviated as SIO) for inputting data in and outputting data to the exterior, connected in parallel by an internal bus 66.

(0016) The first SIO 62 is of a circuit arrangement generally identical to a conventional one permitting the input and output of data formed under the RS-232C standard, the input and output terminals thereof being connected to the pins 42 of the above-described first connector 34.

(0017) The second SIO 64, in this embodiment, is formed under the RS-485 standard, allowing a plurality of adapters 22 to be connected in the bus system. Specifically, it comprises balanced type communication lines 12 including two output lines 70 driven by a driver 68 and two input lines 74 connected to a receiver 72, respectively, and 30 sets, at the most, (5 sets in this embodiment) of the drivers 68 and the receivers 72 are arranged in parallel to each other.